

Recovery Plan Action Status

Plan Name: South Florida Multi-Species Recovery Plan (68 spp.)

Plan Status: Final

Plan Date: 18-May-99

Lead Agency: USFWS

Lead Office: South Florida Ecological Services Field Office

(772) 562-3909

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Four-petal pawpaw (Asimina tetramera)	2	aste-h1.1	Secure habitat through acquisition, landowner agreements, and conservation easements.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Non-governmental organizations, Florida Division of Forestry	Acquisition: Easement, Acquisition: General	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired; Action lead(s): FWS, FDEP, DOF, counties, TNC
Four-petal pawpaw (Asimina tetramera)	2	aste-h1.2.1	Conduct prescribed burns for four-petal pawpaw (Asimina tetramera)	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Non-governmental organizations	Management: Habitat Maintenance and Manipulation	Labor type not yet selected	Cost is per acre (ex. 1/acre); Total cost dependent upon number of acres burned. Action lead(s): FWS, FDEP, DOF, counties
Four-petal pawpaw (Asimina tetramera)	2	aste-h1.2.2	Control and eliminate exotic and invasive plants and animals.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Non-governmental organizations	Management: Predator and Competitor Control	Labor type not yet selected	Cost is per acre (ex. 2/acre); Total cost dependent upon number of acres infested with exotics. Action lead(s): FWS, FDEP, counties.
Four-petal pawpaw (Asimina tetramera)	3	aste-h1.2.3	Control access to areas where listed plants are growing.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, South Florida counties	Management	Labor type not yet selected	Task currently conducted and cost is included in responsible agency's budget. Action lead(s): FWS, FDEP, counties.
Four-petal pawpaw (Asimina tetramera)	2	aste-h2.1	Restore natural fire regime.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Non-governmental organizations	Management: Habitat Maintenance and Manipulation	Labor type not yet selected	Cost is per acre (ex. 1/acre); Total cost dependent upon number of acres burned. Action lead(s): FWS, FDEP, DOF, counties

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Four-petal pawpaw (Asimina tetramera)	2	aste-h2.2	Enhance sites with native plant species.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Non-governmental organizations	Management: Habitat Maintenance and Manipulation	Labor type not yet selected	Cost is per acre (ex. .5/acre); Total cost dependent upon number of acres enhanced. Action lead(s): FWS, FDEP, counties
Four-petal pawpaw (Asimina tetramera)	3	aste-h3.0	Continue habitat-level research projects.	Ongoing Not Current	Prior to FY 1995		Florida Department of Environmental Protection, Non-governmental organizations, Public and private universities	Research: Habitat Requirements, Research: Habitat Status	Labor type not yet selected	Action lead(s): FWS, universities
Four-petal pawpaw (Asimina tetramera)	3	aste-h4.0	Monitor habitat/ecological processes.	Ongoing Not Current	Prior to FY 1995		Florida Department of Environmental Protection, South Florida counties	Research: Ecosystem Studies, Research: Habitat Status	Labor type not yet selected	Action lead(s): FWS, FDEP, counties
Four-petal pawpaw (Asimina tetramera)	3	aste-h5.0	Provide public information about xeric vegetative communities and their unique biota.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Non-governmental organizations, Florida Division of Forestry	Other: Information and Education	Labor type not yet selected	Action lead(s): FWS
Four-petal pawpaw (Asimina tetramera)	2	aste-s1.1.1	Continue surveys in Palm Beach and Martin Counties.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, South Florida counties	Research: Population Surveys	Labor type not yet selected	Action lead(s): NGO
Four-petal pawpaw (Asimina tetramera)	2	aste-s1.1.2	Continue surveys on protected lands.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, South Florida counties	Research: Population Surveys	Labor type not yet selected	Action lead(s): FWS, FDEP, counties
Four-petal pawpaw (Asimina tetramera)	3	aste-s1.2	Maintain distribution of known populations and suitable habitat in GIS database.	Not Started			Florida Department of Environmental Protection, Non-governmental organizations, Florida Natural Areas Inventory	Research: Population Assessment	Labor type not yet selected	Action lead(s): FWS

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Four-petal pawpaw (Asimina tetramera)	2	aste-s2.1	Acquire or otherwise protect privately-owned habitat through acquisition, conservation easements, or agreements with landowners.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Non-governmental organizations, Florida Division of Forestry, South Florida counties, Private industry, landowners, etc.	Acquisition: Easement, Acquisition: General	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired; Action lead(s): FWS, counties, FDEP, DOF, TNC
Four-petal pawpaw (Asimina tetramera)	1	aste-s2.2	Protect populations of four-petal pawpaw on public lands.	Ongoing Current	FY 1995 - FY 1999		U.S. Bureau of Land Management, Local Governments, Florida Department of Environmental Protection, United States Coast Guard , South Florida counties	Management: General	Labor type not yet selected	Cost dependent upon type of protection provided. Action lead(s): FWS, FDEP, counties, USCG, BLM, local government
Four-petal pawpaw (Asimina tetramera)	2	aste-s2.3	Use local or regional planning to protect habitat.	Ongoing Current	FY 1995 - FY 1999		Local Governments, South Florida counties	Other: Administration	Labor type not yet selected	Cost included in responsible agency's budget. Action lead(s): FWS, counties, local government
Four-petal pawpaw (Asimina tetramera)	1	aste-s2.4	Continue ex situ conservation.	Ongoing Current	FY 1995 - FY 1999		Non-governmental organizations, Private industry, landowners, etc.	Management: Propagation	Labor type not yet selected	Action lead(s): NGO
Four-petal pawpaw (Asimina tetramera)	2	aste-s2.5.1	Initiate section 7 consultation when applicable.	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Department of Agriculture, U.S. Geological Survey, Biological Resources Division, U.S. Federal Emergency Management Agency, U.S. Geological Survey, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, Natural Resources Conservation Service , United States Coast Guard , U.S. Air Force, US Forest Service, Naval Air Station Key West	Other: Regulations	Labor type not yet selected	Cost included in standard operating procedures of Federal agency's budget. Action lead(s): All Federal agencies

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Four-petal pawpaw (Asimina tetramera)	3	aste-s2.5.2	Enforce take and trade prohibitions.	Ongoing Current	Prior to FY 1995		Florida Department of Agriculture and Consumer Services/Division of Plant Industry	Other: Law Enforcement	Labor type not yet selected	Cost included in standard operating budgets of participating agencies. Action lead(s): FWS
Four-petal pawpaw (Asimina tetramera)	1	aste-s2.6.1	Establish a protocol for reintroduction.	Complete	FY 2006	FY 2007	Florida Department of Environmental Protection, South Florida counties	Research: Reintroduction	Contract	Action lead(s): FWS, NGO
Four-petal pawpaw (Asimina tetramera)	1	aste-s2.6.2	Locate potential (re)introduction sites.	Ongoing Current	FY 2008		U.S. Bureau of Land Management, Non-governmental organizations, Bok Tower Gardens	Research: Reintroduction	Species Expert, Volunteer	Action lead(s): FWS, FDEP, NGO
Four-petal pawpaw (Asimina tetramera)	1	aste-s2.6.3	(Re)introduce plants to protected sites.	Ongoing Current	FY 2009		U.S. Bureau of Land Management, Non-governmental organizations, Bok Tower Gardens	Management: Reintroduction	Species Expert, Volunteer	Action lead(s): FWS, FDEP, NGO
Four-petal pawpaw (Asimina tetramera)	2	aste-s3.1	Continue research to determine demographic information.	Ongoing Current	Prior to FY 1995		Florida Department of Environmental Protection, Non-governmental organizations, Public and private universities	Research: Demographic Studies	Labor type not yet selected	Initial demographic information obtained from Cox (1998). Action lead(s): universities, NGO
Four-petal pawpaw (Asimina tetramera)	2	aste-s3.2	Once demographic data are known, conduct a population viability and risk assessment analysis.	Not Started			Non-governmental organizations, Private industry, landowners, etc., Public and private universities	Research: Population Assessment	Labor type not yet selected	Action lead(s): FWS
Four-petal pawpaw (Asimina tetramera)	2	aste-s3.3	Conduct research to assess management requirements of four-petal pawpaw.	Ongoing Current	Prior to FY 1995		Florida Department of Environmental Protection, Non-governmental organizations, Private industry, landowners, etc., Public and private universities	Research: Management Techniques	Labor type not yet selected	Action lead(s): universities
Four-petal pawpaw (Asimina tetramera)	3	aste-s3.4	Assess feasibility of relocating four-petal pawpaw.	Not Started			Florida Department of Environmental Protection, Non-governmental organizations, Private industry, landowners, etc., Public and private universities	Research: Other Information	Labor type not yet selected	Action lead(s): FWS and universities

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Four-petal pawpaw (Asimina tetramera)	2	aste-s4.1.1	Monitor to detect changes in demographic characteristics.	Ongoing Current	Prior to FY 1995		Florida Department of Environmental Protection, Non-governmental organizations, South Florida counties	Research: Demographic Studies	Labor type not yet selected	Action lead(s): FDEP, counties, NGO
Four-petal pawpaw (Asimina tetramera)	2	aste-s4.1.2	Monitor the effects of various land management actions on four-petal pawpaw.	Not Started			Florida Department of Environmental Protection, Non-governmental organizations, South Florida counties	Research: Management Techniques	Labor type not yet selected	Action lead(s): FWS, FDEP, counties, NGO
Four-petal pawpaw (Asimina tetramera)	2	aste-s4.2	Develop a quantitative description of the population structure of four-petal pawpaw.	Ongoing Not Current	Prior to FY 1995		Florida Department of Environmental Protection, Non-governmental organizations, South Florida counties, Public and private universities	Research: Population Assessment	Labor type not yet selected	Complete for Jonathan Dickinson State Park. Action lead(s): universities and NGO
Four-petal pawpaw (Asimina tetramera)	2	aste-s4.3	Monitor introduced plants.	Ongoing Current	FY 2009		Florida Department of Environmental Protection, Non-governmental organizations, South Florida counties, Public and private universities	Research: Reintroduction	Species Expert, Volunteer	Action lead(s): FDEP, counties, NGO
Four-petal pawpaw (Asimina tetramera)	3	aste-s5.0	Provide public information about four-petal pawpaw.	Ongoing Current	FY 1995 - FY 1999		Florida Department of Environmental Protection, Non-governmental organizations, South Florida counties, Private industry, landowners, etc.	Other: Information and Education	Labor type not yet selected	Action lead(s): FWS
Four-petal pawpaw (Asimina tetramera)	3	aste-s6.0	Establish delisting criteria.	Not Started			Florida Department of Environmental Protection, South Florida counties, Public and private universities	Management: Planning	Labor type not yet selected	Action lead(s): FWS